UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,318	11/25/2003	Murtuza Lokhandwalla	135858	9461

6147 7590 05/28/2009

GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER	
CHENG, JACQUELINE	

ART UNIT	PAPER NUMBER
3768	

NOTIFICATION DATE	DELIVERY MODE
05/28/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ldocket@crd.ge.com
rosssr@crd.ge.com
parkskl@crd.ge.com

Office Action Summary	Application No.	Applicant(s)	
	10/723,318	LOKHANDWALLA ET AL.	
	Examiner	Art Unit	
	JACQUELINE CHENG	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *12-14* is/are allowed.

6)☒ Claim(s) *1-10,15-17 and 19-22* is/are rejected.

7)☒ Claim(s) *11 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed March 27, 2009 with respect to the 35 U.S.C. 103(a) rejection of claims 1-4, 6 and 8 over Williams (US 4,885,827) in view of Zhang (US 2004/0090334 A1) have been fully considered but they are not persuasive. The examiner respectfully disagrees with the applicants arguments that there is additional language in the body of claim 1 that is directed to medical imaging. The body of claim 1 reads "a tissue compression membrane suited to minimize image distortion". This "image distortion" can be distortion in any image as it does not have a "said" or "the" tying it back to the medical imaging of the preamble. The body of claim 1 also reads "a plurality of tensioning apparatuses coupled to said membrane to apply a tensile force to said membrane to place said membrane in a taut condition during an imaging process". This "an imaging process" can be any imaging process (such as the imaging process of a drowsiness detection system) as it does not relate back to the preamble. As stated in the previous office action the preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See MPEP 2111.02 and *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The examiner suggests the applicant amend the claim to read –suited to minimize distortion in a medical image-- and --a medical imaging process-- to tie the claim to medical imaging and to overcome the rejections over Williams in view of Zhang.

2. The examiner also respectfully disagrees with the applicants arguments that Williams automobile seat is obviously not suited to minimize image distortion. Since Williams automobile seat does not create more distortion in the image, its contribution to the image minimizes distortion. Since "suited to" does not structurally define how distortion is minimized anything that does not create more distortion in an image is "suited to minimize image distortion".

3. As to the applicant's arguments that Williams membrane does not compress the tissue of a person seated in Williams car seat the examiner respectfully disagrees because any pressure placed upon a body would compress tissue. In this case the seat along with the person's weight is compressing the buttocks (tissue) of a person seated in Williams car seat.

4. In regards to the combination of Williams and Zhang it would be obvious for one to either place the elastic membrane seat of Williams into Zhang's car with the drowiness detection system for the purpose of providing more comfort to the driver by adjusting the tension in the seat and/or the natural frequency of the seat, or to place the drowsiness detection system of Zhang into the car of Williams with the elastic membrane seat for the purpose of increasing safety and preventing the driver from falling asleep at the wheel.

5. Applicant's arguments with respect to claims 5, 10 and 11 have been fully considered and are persuasive. The 35 U.S.C. 103(a) rejection of these claims over Williams in view of Zhang have been withdrawn.

6. As to the applicant's traversal of the examiner's rejection of claims under 35 U.S.C. 103(a) as being unpatentable over Galkin the examiner respectfully disagrees. Although part of the purpose of Galkin's apparatus is to provide a cushion to the underside of a breast, the top surface of the cushion also serves as a compression membrane. The membrane compresses the

breast while the cushion cushions the breast. Any membrane that places any pressure onto tissue compresses the tissue and therefore is a compression membrane (see for example US 6,128,523 to Bechtold which discusses a "compression cushion").

7. Galkin further discloses that the compression membrane (compressible material with which the comfort device is fabricated with) can comprise a plurality of chambers that have the ability to retain and release gas (inflatable bladders) (col. 3 line 41-43, col. 6 line 62-col. 7 line 3, col. 11 line 20-27). The inflation of the chambers for cushioning applies a tensile force to the membrane, in all directions including along a pair of mutually orthogonal axes, which brings the membrane into a taut condition (such as shown in fig. 8c).

8. The examiner respectfully disagrees with applicant's arguments against the rejection of claim 15 for the reasons discussed above furthermore because claim 15 does not claim the multiple cushions as being separately adjusted so whether Galkin discloses this or not is irrelevant to claim 15.

9. Applicant's arguments with respect to claims 7, 12, 14, 18, 19, and 22 have been fully considered and are persuasive. The 35 U.S.C. 103(a) rejection of these claims over Williams in view of Zhang have been withdrawn.

Drawings

10. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

11. **Claims 1, 12, and 15** are objected to for being unclear. It is unclear what the specific features are or how the membrane is "suited to minimize image distortion".

Claim Rejections - 35 USC § 112

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. **Claim 5 and 19** rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the tensioning apparatuses each comprising an inflatable bladder to provide tension to the membrane and for a moveable tension plate responsive to a mechanical command for applying the tensile forces, does not reasonably provide enablement for the tensioning apparatus each comprising an inflatable bladder and further comprising a movable tension plate responsive to a mechanical command for applying the tensile force (claim 5). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. In fact paragraph 0022 states that the inflatable bladders can be used in lieu of the tension plate teaching that either the inflatable bladders or the tension plate is used, not both at the same time.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. **Claims 1-4, 6, and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams (US 4,885,827) in view of Zhang (US 2004/0090334 A1). Williams discloses an apparatus comprising a compression membrane (fig. 1 element 40) supported by a frame (figs. 1 and 2 element 30) and a plurality of tensioning apparatuses each comprising a pair of inflatable bladders (fig. 2 elements 50 and 55) also supported by the frame. The inflatable bladders are pneumatically inflated to apply a tensile force to the membrane (through tube 60 in fig. 1) in two directions. The air pressure in each of the bladders can be adjusted depending on the size and/or shape of the tissue that is to be compressed (col. 3 line 15-32). The invention of Williams can be used in any car, such as a car that has installed a drowsiness detection system as disclosed by Zhang. The drowsiness detection system uses an imaging process to determine a driver's drowsiness level. Therefore while the driver is driving, the membrane is in the taut condition during the constant imaging process of the drowsiness detection system.

16. Claims 1-4, and 6-10, 15-17, 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galkin (US 6,850,590 B2).

17. **Claims 1-4, 6, 8-10, 15-17, 20, 22**: Galkin discloses an apparatus for x-ray mammography comprising a compression membrane that is stretched over a cassette holder. The membrane can comprise multiple inflatable chambers (bladders) into which a fluid, such as air can be forced into (abstract, col. 5 line 64-66, col. 7 line 1-3). As the air is being forced into the chamber, the membrane gets tauter. The membrane can accept air until it is taut and pushing against the breast as shown in figure 9c. Furthermore the compression member is also suited to minimize image distortion as it is made of material that is transparent to x-rays and does not compromise image quality (col. 8 line 39-41). Also the inflatable compression membrane can change its shape in how it is compressing the breast so that images can be retaken without repositioning the breast. This minimizes image distortion as it fixes the problem of the fact that overlapping internal structures can obscure delineation in a radiographic image (col. 9 line 40-45, col. 2 line 9-14).

18. **Claims 7, 21:** Galkin does not explicitly disclose how thick the membrane material is however it would be obvious to not let the membrane material be a thickness not exceeding 0.5 mm since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art (In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPQ 1980)).

Allowable Subject Matter

19. **Claims 12-14** are allowed.

20. **Claims 11 and 18** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACQUELINE CHENG whose telephone number is (571)272-5596. The examiner can normally be reached on M-F 10:00-6:30.

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JC

/Long V Le/
Supervisory Patent Examiner, Art Unit 3768